

# Securing the Nuclear Fuel Cycle

INL offers comprehensive MPC&A system evaluations and demonstrations in conjunction with an operating nuclear R&D environment, providing real world safeguards and security techniques and approaches.



## Material Protection Control & Accountability Interactive Evaluation and Training Center

**I**daho National Laboratory (INL) serves as the U.S. Department of Energy lead laboratory for nuclear energy and fuel cycle technologies. As such, the laboratory is steward to an impressive host of nuclear energy and fuel cycle operations and expertise, including two operating nuclear reactors, fuel processing facilities, fuel and nuclear materials storage, operating hot cell facilities, and a variety of irradiated and unirradiated nuclear materials.

Since 1994, INL has used this first-hand experience and its operating facilities to provide instructional and hands-on nuclear material protection,

control and accountability and emergency management training to personnel responsible for security at commercial nuclear reactors, research reactors and facilities world-wide. Beginning in 1997, this training has been conducted at the Material Protection, Control and Accountability (MPC&A) Interactive Evaluation and Training

Center located within the Materials and Fuels Complex on the INL near Idaho Falls, Idaho.

### **International Experience**

INL staff has provided MPC&A training to personnel from China, Latvia, Kazakhstan, Russia, Ukraine and Uzbekistan. Our experts have also

*Continued next page*



**Kazakhstan students discussing vehicle search techniques.**

National Security



*The MPC&A Interactive Evaluation and Training Center is equipped with a perimeter intrusion detection and assessment system, a central alarm station, simulated vault and access control systems.*



### For more information

**Bruce Meppen**  
(208) 526-7022  
bruce.meppen@inl.gov

**Wade Smout**  
(208) 533-7936  
wade.smout@inl.gov

A U.S. Department of Energy  
National Laboratory



*Continued from previous page*

provided inspection techniques training to State Regulators from Latvia, Kazakhstan, Russia and the Ukraine.

### Facility

The MPC&A Interactive Evaluation and Training Center is conveniently located, and in most cases, can accommodate foreign national students. The training is provided in conjunction with an operating environment, allowing students to learn standardized techniques and approaches to safeguards and security employed within the DOE complex, in a **real-world environment**. Students are also able to evaluate the effectiveness of the techniques and approaches as well as physical protection systems, using a full suite of operating detection and assessment systems and a fully functioning Central Alarm Station (CAS). All of these capabilities are offered in one complex – the MPC&A Interactive Evaluation and Training Center.

### Qualified Instructors

The instructor cadre is made up of physical security and material control and accountability experts and security systems technicians. Operational personnel, used

as adjunct instructors, provide additional credibility for students coming from commercial or research reactor facilities.

Expert instructors include:

- Protective force staff
- Security experts
- Electronic security system experts
- Surveillance system experts
- Emergency management personnel
- Information technology professionals

### Interactive Modules

The following training modules have been developed and are immediately available:

- Material Protection, Control and Accountability
- Emergency Management
- Guard Force Procedures
- Access Control Equipment and Operations

- Electronic Security Systems
- Vehicle Searches
- Lock and Key Control
- Performance Testing
- Central Alarm Station Operations
- System Testing and Maintenance
- Video Surveillance
- MPC&A Inspection Techniques

### Exercises

Practical exercises in the following topical areas are also available:

- Evaluation of S&S Effectiveness at Nuclear Facilities
- Managing Emergency Events
- Command and Control
- System Testing and Maintenance
- Access Control
- Lock and Key Control



*Hands-on Central Alarm Station operations evaluation.*